REMARKS

Claim 2 has been canceled without prejudice. Claim 1 has been amended to include the limitations of cancelled claim 2.

A. The Rejections

Claims 1-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 6,485,780 to Sangeeta et al. (hereafter "Sangeeta") in view of U.S. Patent 5,366,765 to Milaniak et al. (hereafter "Milaniak") and U.S. Patent 6,497,920 to Pfaendtner et al. (hereafter "Pfaendtner"). The Examiner alleges that Sangeeta discloses the elements of independent claim 1 from which claims 2-6 depend, except the slurry containing a halide activator, a water soluble organic binder, and a powder of an aluminum-containing intermetallic compound. However, the Examiner alleges that Milaniak "teaches that an aluminide coating can be added to a surface using particulate aluminum, an inert ceramic particulate, a halide activator and an aqueous base dispersant including a water soluble organic binder." In addition, the Examiner states that neither Sangeeta nor Milaniak explicitly teach an aluminum-containing intermetallic compound, however, alleges that Pfaendtner teaches "the use of titanium-aluminum alloys in the course of providing an aluminide coating to a surface." Since $TiAl_3$ is a known alloy of this type, the Examiner states, "The selection of a known material based on its suitability for its intended use has been shown to support a *prima facie* obviousness determination."

B. Applicants' Arguments

35 USC §103(a)

A prima facie case of obviousness requires showing that the scope and content of the prior art teaches each and every element of the claimed invention. In re Oetiker, 24

U.S.P.Q.2d 1443 (Fed. Cir. 1992); In re Vaeck, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). In addition, to establish obviousness, it must be shown that a person of ordinary skill in the art would have had reason to attempt to make the composition or device, or carry out the claimed process, and would have had a reasonable expectation of success in doing so. Pharmastem Therapeutics, Inc. v. Viacell, Inc., 491 F.3d 1342, 1360 (Fed. Cir. 2007) (citing KSR Int'l Co. v. Teleflex Inc., 127 S.Ct. 1727, 1740, 167 L.Ed.2d 705 (2007)). In the present case, the combination of prior art fails to teach the elements of the claims, and moreover, one of ordinary skill in the art would have no reason to make the composition.

In the present case, the Examiner has failed to establish a prima facie case of obviousness against the instant claims because neither Sangeeta, Milaniak nor Pfaendtner, alone or in combination, teach or suggest use of "TiAl3 or αTiAl3 having a theoretical aluminum ratio of 62.8% by weight and containing 0.5% or less impurities is used as the intermetallic compound" as does claim 1 from which claims 2-6 depend. For example, while Pfaendtner teaches "the use of titanium-aluminum alloys in the course of providing an aluminide coating to a surface, Pfaendtner does not teach use of and alloy having "a theoretical aluminum ratio of 62.8% by weight and containing 0.5% or less impurities." Pfaendtner teaches that the source of aluminum is preferably one of several alloys, including titanium-aluminum, but does not mention an essential aluminum ratio of the alloy or that the ratio shall be held at any constant value as does claim 1. Rather, col. 5, lines 38-40 states, "A cobalt-aluminum alloy having about 50 percent by weight cobalt, balance aluminum, is preferred," and two examples are given using the cobalt 50-weight percent aluminum alloy (see column 7, lines 13-35). Respectfully, Applicants assert that the "about 50 percent" ratio used in Pfaendtner does not suggest a "62.8 %" ratio required in the present invention. Thus, Pfaendtner fails to provide the elements that Sangeeta and Milaniak lack and further, Pfaendtner does not lead one of ordinary skill in the art to use the titanium-aluminum alloy

having 62.8% aluminum ratio as claimed in claim 1.

Applicants respectfully assert that the use of "TiAl3 or αTiAl3 having a theoretical aluminum ratio of 62.8% by weight and containing 0.5% or less impurities" as the intermetallic compound allows a coating with stable quality to be readily applied with a aluminum-containing intermetallic compound powder having a precisely fixed aluminum content. The stable quality coating produced can be readily applied to a damaged area of a high temperature metal component without using excess slurry components and the resulting coating has less cracking or chipping after the oxidation resistance test and therefore has high oxidation resistance. Figures 4B and 5B of the specification illustrate that the coating microstructure after oxidation resistance testing is free from defects such as cracks and has excellent oxidation resistance. Thus, Applicants assert that the specific ratio used is an essential aspect of the invention that has not been taught or disclosed by the cited references and yields superior results to conventional methods.

CONCLUSION

In view of the present amendment and for all of the above reasons, Applicants respectfully assert that claims 1-6 are in condition for allowance and a prompt notice of allowance is earnestly solicited.

The below-signed attorney for Applicants welcomes any questions.

Respectfully submitted,

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